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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,402	09/16/2003	Warren M. Farnworth	2269-5595US (01-0088.00/U)	2929
24247	7590	11/15/2006	EXAMINER CHEN, VIVIAN	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ART UNIT 1773	PAPER NUMBER

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/663,402

Applicant(s)

FARNWORTH ET AL.

Examiner

Vivian Chen

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1773

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 06 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see Detailed Advisory Action. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 21-27,29-37,40-45,69-74,76-80 and 91-111.  
Claim(s) withdrawn from consideration: 28,38,39,75,81 and 82.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see Detailed Advisory Action.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

Vivian Chen  
Primary Examiner  
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**DETAILED ADVISORY ACTION**

1. Claims 1-20, 46-68, 83-91 have been cancelled by Applicant.

***Response to Proposed Amendments***

2. The proposed amendments will **NOT** be entered because they raise new issues that would require further consideration and/or search. The proposed new limitations specifying the absence of additional finishing has not been previously presented or claimed.

***Specification***

3. The amendments filed 9/15/2005 and 3/15/2006 are objected to under 35 U.S.C. 132(a) because they introduce new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the newly added recitation of “programmed material consolidation”.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

4. Claims 21-27, 29-37, 40-45, 69-74, 76-80, 92-111 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

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had possession of the claimed invention. The specification only provides support for the recitation of stereolithographic fabrication, not other methods of programmed material consolidation (e.g., fused deposition modeling, selective laser sintering, polyjet, thermal or photopolymer phase change inkjet processes, etc.).

5. Claims 26-27, 37, 73-74 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 26-27, 37, 73-74, the phrase “substantially planar” is vague and indefinite because it is unclear what constitutes “substantially” planar.

6. The rejections of claims 43, 45 under 35 U.S.C. 112, second paragraph, in the previous Office Action have been withdrawn in view of Applicant’s arguments presented 9/6/2006.

***Claim Rejections - 35 USC § 103***

7. Claims 69, 71, 76 remain rejected under 35 U.S.C. 103(a) as being unpatentable over CRUMP (US 5,121,329),

for the reasons stated in the previous Office Action,

because the proposed amendments filed 9/6/2006 have **NOT** been entered.

***Response to Amendment***

8. The rejections of claims 21-22, 24, 26-27, 35-37, 40-42, 45, 73-74 under 35 U.S.C. 103(a) have been withdrawn in view of Applicant's amendments filed 3/15/2006. However, the Examiner's withdrawal of these rejections does **NOT** constitute a concession as to the applicability or non-applicability of the previously cited prior art to the previously presented claims or to the claims as presently amended. Upon cancellation of any new matter, some or all rejections may be reinstated.

***Response to Arguments***

9. Applicant's arguments filed 9/6/2006 with respect to the outstanding rejection under 35 USC 103(a) is deemed moot because the proposed Amendments have **NOT** been entered.

10. Applicant's arguments filed 9/6/2006 have been fully considered but they are not persuasive.

(A) Applicant argues that the specification as originally filed provides support for the term "programmed material consolidation". However, while the specification provides support for a particular sub-type of programmed material consolidation (i.e., stereolithography), it does not provide support for the considerably broader term "programmed material consolidation" which encompasses virtually any of numerous additive-type rapid prototyping methods which utilizes programming to form an object (e.g., fused deposition modeling, selective laser sintering, polyjet, thermal or photopolymer phase change inkjet processes, etc.) -- many of which have requirements and considerations which are not addressed and therefore are ***not*** deemed enabled

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by the specification as originally filed. For illustrative examples, see the attached exhibits (“RAPID PROTOTYPING STEREOLITHOGRAPHY, SELECTIVE LASER SINTERING, AND POLYJET....” (Abstract); Wikipedia article on RAPID PROTOTYPING; HIATT ET AL (US 2004/0148353), paragraph 0016) which disclose various additive-type rapid prototyping technologies which would fall under the broad designation of “programmed material consolidation” but are recognized in the art as being distinct technologies from stereolithography. Therefore, the disclosure of only stereolithography in the specification as originally filed does not provide adequate support for the substantially broader recitation of “programmed material consolidation”.

The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species. A “representative number of species” means that the species which are adequately described are representative of the entire genus. Thus, when there is substantial variation within the genus, one must describe a sufficient variety of species to reflect the variation within the genus. The disclosure of only one species encompassed within a genus adequately describes a claim directed to that genus only if the disclosure “indicates that the patentee has invented species sufficient to constitute the gen[us].” See *Enzo Biochem*, 323 F.3d at 966, 63 USPQ2d at 1615. “A patentee will not be deemed to have invented species sufficient to constitute the genus by virtue of having disclosed a single species when ... the evidence indicates ordinary artisans could not predict the operability in the invention of any species other than the one disclosed.” *In re Curtis*, 354 F.3d 1347, 1358, 69 USPQ2d 1274, 1282 (Fed. Cir. 2004) (MPEP 2163.04)

In the present instance, the disclosure in the specification as originally filed of only one species (stereolithography) of a genus (“programmed material consolidation”) does not constitute a “representative number of species” of that genus, especially when said genus displays art-recognized degrees of differences and variations, therefore the specification as originally filed does not provide adequate support for the substantially broader recitation of “programmed material consolidation”.

(B) Applicant argues that the terms “substantially planar” is not vague and indefinite because the specification as originally filed clearly establishes the meaning of those terms.

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However, with respect to “substantially planar”, the specification only discloses what constitutes a planar surface, but does not clearly establish what constitutes a “substantially” planar surface, since how much deviation from a planar surface is dependent on various situations.

Furthermore, it is unclear whether the “substantially planar” encompass small scale irregularities (e.g., on the microscopic scale) and/or whether the term is intended to refer to macroscopic scale irregularities such as the presence of ‘minor’ amounts of surface curvature, and in either case, how much nonplanarity is permissible, since the determination of planarity is highly situation-dependent.

#### ***Conclusion***

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 13, 2006



Vivian Chen  
Primary Examiner  
Art Unit 1773